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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/630,464 | 07/30/2003 | Russell A. Boellner | 03163-PA | 9172 |

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EXAMINER

SLACK, NAKO N

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3635

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,464

Applicant(s)

BOELLNER ET AL.

Examiner

Naoko Slack

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-15, 22-32 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 16-21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-28 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 10, 12-15, 29 is/are rejected.
- 7) ☒ Claim(s) 5, 7-9, 11, 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date August 22, 2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Restriction Requirement

Applicant's response to the Restriction Requirement received October 20, 2004 has been entered. Claims 2-4 and 16-21 are drawn to non-elected invention. Claims 1, 5-15, 22-32 are pending, and an Office action on these claims follows.

Claim Rejections – 35 USC 102(b)

The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 12, 14, 15, and 29-32 are rejected under 35 USC 102(b) as being clearly anticipated by US Patent 5,544,464 to Dutil.

Claim 1:

Dutil discloses a floor system comprising a joist with a bottom chord (13), a top chord (11) and a web (12) fixed therebetween wherein the top chord has a first elongated structural angle and a second elongated structural angle, the first structural angle (21) having in cross-section a horizontally-extending lrg and an upwardly-extending leg meeting at a corner, said second structural angle having in cross-section a horizontally-extending leg (16) and a downwardly-extending leg (19) meeting at a corner, wherein an upper portion of the web is joined to the top chord second structural angle against the

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downwardly-extending leg, the first structural angle is joined to the second structural angle (column 3, lines 28-31).

Claim 12:

The web (12) comprises a series of adjacent compression and tension members (column 3, line 20).

Claim 14:

Dutil discloses a composite slab and joist assembly comprising a joist with a bottom chord (13), a top chord (11) and web (12), at least one deck panel (24) positioned on one of the horizontally-extending legs of the joist's top chord, slab reinforcement (26, Figure 2) positioned above the joist and at least one deck panel, and a slab of concrete formed on the at least one deck panel and on top of the joist, the slab enclosing the slab reinforcement and a top portion of the joist.

Claim 15:

The slab reinforcement comprises a mesh (column 3, lines 48-51).

Claim 29:

Dutil discloses a building structure having at least a first joist (10) including a top chord (11), a bottom chord (13), and a web (12) therebetween, the web including compression and tension members (serpentine, column 3, line 20), each with upper and lower ends, the top chord includes at least one structural angle having a horizontally-extending leg and a downwardly-extending leg (19) wherein the respective upper ends of the tension and compression members of the web are secured to the downwardly-

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extending leg of the structural angle (leg 19 is welded to the open web 12, column 3, lines 26-28).

Claim Rejections – 35 USC 103

The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 USC 103(a) as being unpatentable over US Patent 5,544,464 to Dutil in view of US Patent 1,863,817 to Wells.

Claim 6:

Wells discloses a shoe (15, Figure 2) attached to a longitudinal end of a joist's top chord for attaching the joist to the girder. While Dutil fails to specify connection of the joists to the building structure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a joist shoe to attach Dutil's joist to the girder, as both Wells and Dutil are concerned with forming a steel flooring system with metal joists, and Wells discloses a shoe for connecting the joist to the supporting girder.

Claim 10 is rejected under 35 USC 103(a) as being unpatentable over US Patent 5,544,464 to Dutil in view of US Patent 4,106,256 to Cody.

Claim 10:

While Dutil fails to disclose a splice for connecting aligned joists, splices are well known in the steel truss industry in constructing longitudinal extensions. For example, Cody discloses a steel truss for supporting concrete wherein aligned trusses are connected with splices (134, Figure 8). Dutil would be motivated to use splices on the top chord of the steel truss as taught by Cody, as Dutil is concerned with accommodating floor widths of varying sizes.

Claim 13 is rejected under 35 USC 103(a) as being unpatentable over US Patent 5,544,464 to Dutil in view of US Patent 4,937,998 to Goldberg.

Claim 13:

While Dutil does not disclose a gap in the joist's web, such a gap is known in the building arts to accommodate ventilation or other similar utilities in the flooring system. For example, Goldberg discloses a joist with a gap (16, Figure 1) for accommodating other construction features (column 3, lines 25-34). In view of Goldberg, it would have been obvious to one of ordinary skill in the art to form a gap in Dutil's joist to accommodate utilities and other features required for the building.

Allowable Subject Matter

Claims 22-28 are allowed.

Objection to Claims, Allowable Subject Matter

Claims 5, 7-9, 11, and 30-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art Made of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Patent 2,860,748 to Cliff and US Patent 3,686,819 to Atkinson disclose metal joists with chords comprising a pair of angle members. US Patent 2,061,103 to Roberts and US Patent 3,527,007 to McManus disclose joist shoes.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Carl D. Friedman can be reached at (703) 308-0839. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

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January 2, 2005



Naoko Slack
Primary Examiner